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Search History

DATE: Wednesday, April 11, 2007 **Purge Queries** Printable Copy Create Case

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DB=USPT; PLUR=YES; OP=OR			
L19	'6163270'.pn.	1	L19
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DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=OR			
L17	L14 and bluetooth	120	L17
L16	L15 and bluetooth	0	L16
L15	L14 not @py>2000	36	L15
L14	L13 and (communications with network or communications adj network or communications near network)	627	L14
L13	L12 and (bluetooth or "personal digital assistant" or "computer data" or "audio data" or "video data")	716	L13
L12	L11 and payment	1196	L12
L11	L9 and (software near products or software with products or software adj products)	2336	L11
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L8	709/230	4388	L8
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L2	705/27	3579	L2
L1	705/26	7336	L1

END OF SEARCH HISTORY

L17: Entry 114 of 120 File: USPT Mar 29, 2005

US-PAT-NO: 6873245
DOCUMENT-IDENTIFIER: US 6873245 B2

TITLE: RF remote appliance control/monitoring network

DATE-ISSUED: March 29, 2005

INVENTOR-INFORMATION:

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APPL-NO: 09/929834 [PALM]
DATE FILED: August 14, 2001

PARENT-CASE:
RELATED APPLICATION This application is a continuation-in-part of application Ser. No., 09/234,968, filed on Jan. 19, 1999, now U.S. Pat. No. 6,275,166, which is incorporated herein by this reference.

INT-CL-ISSUED: [07] G05B 23/02

INT-CL-CURRENT:

TYPE IPC	DATE
CIPP H04 L 12/28	20060101

US-CL-ISSUED: 340/3.5; 340/825.07, 340/825.44
US-CL-CURRENT: 340/3.5

FIELD-OF-CLASSIFICATION-SEARCH: 340/3.5, 340/825.07, 340/825.44, 340/825.53, 340/825.73, 370/342, 370/335
See application file for complete search history.

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
☐	4199761	April 1980	Whyte et al.	340/825.52
☐	4212078	July 1980	Games	700/2
☐	4394775	July 1983	Bruinsma	455/17
☐	4429299	January 1984	Kabat	340/310.07
☐	4901307	February 1990	Gilhousen et al.	370/320
☐	4903262	February 1990	Dissosway et al.	370/327
☐	5021794	June 1991	Lawrence	342/457
☐	5087099	February 1992	Stolarczyk	299/1.6
☐	5265150	November 1993	Helmkamp et al.	455/555
☐	5364024	November 1994	Lin	236/44C
☐	5390206	February 1995	Rein et al.	375/310
☐	5395042	March 1995	Riley et al.	236/46R
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☐	5440301	August 1995	Evans	340/870.11
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☐	5526376	June 1996	Kellenberger et al.	375/211
☐	5745849	April 1998	Britton	455/404.1
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☐	5892758	April 1999	Argyroudis	370/335
☐	6060996	May 2000	Kaiser et al.	340/825.44
☐	6275166	August 2001	del Castillo et al.	340/5.1

ART-UNIT: 2635

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ASSISTANT-EXAMINER: Bangachon; William

ATTY-AGENT-FIRM: Sheldon & Mak PC

ABSTRACT:

A system for managing a distributed array of appliances includes a distributed array of the units, at least some of the relay units being appliance controllers having an appliance interface. At least some communications are relayed through at least two other relay units for coverage over a wide range using low power transceivers, based on automatically generated routing tables that are maintained in the relay units.

12 Claims, 10 Drawing figures

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L17: Entry 114 of 120 File: USPT Mar 29, 2005

DOCUMENT-IDENTIFIER: US 6873245 B2
TITLE: RF remote appliance control/monitoring network

Detailed Description Text (2):
The present invention is directed to a wireless communication system that is particularly effective in a variety locally and remotely distributed configurations. With reference to FIGS. 1-3 of the drawings, an appliance management system 10 for a network environment such as a building plant 11 includes a distributed array of appliance management stations (AMSs) 12 that have wireless communications with a headend control station (HCS) 14 and/or with each other. The building plant 11 can be a service facility such as a hotel, motel, hospital, or shopping mall, a manufacturing facility, or any facility having a distributed array of appliances to be controlled and/or monitored. More generally, the building plant 11 is understood to mean any geographic area within which AMSs 12 of the system 10 are to be located. In the exemplary configuration of FIGS. 1-3, the HCS 14 includes a headend control computer (HCC) 16 that is typically interfaced to satellite terminals 17, the HCS 14 also including a headend transceiver unit (HTU) 18 for wireless communications with the AMSs 12. It will be understood that one or more of the AMSs 12 can also be interfaced to counterpart satellite terminals 17 and/or publically accessible networks such as the Internet, and to function as the HCC, alone or in concert. The HCC 16 typically includes a conventional network interface hub 16H for connecting the satellite or network terminals 17, and may also include a modem 16M for telephonic communications and/or a satellite communications link 16S. The term "satellite" in the context of the terminals 17 means "subordinate" as analogous to a follower or attendant of a higher authority, the higher authority being the HCS 14 or any particular one of the AMSs 12 that may at any given time be functioning as a HCS. In the context only of the communications link 16S (and counterparts thereof), it means a link to an earth-orbiting satellite 19 as indicated in FIG. 1. Computers suitable for use as the HCC 16 include those generally known as "personal computers", preferably having minimum specifications including an Intel Pentium.RTM. P2 processor, 128 MB RAM, 6 GB hard disk drive, 100 MB ZIP drive, 32.times. CDROM drive, four RS-232 I/O ports with a DB9 interface, a USB mouse port, a keyboard port, a parallel printer port, a 100 BT network interface port, a 15-inch SVGA color monitor having 0.28 mm dot pitch, and a 600 dpi laser printer having a speed of 6 ppm, 110 key keyboard, and a Microsoft 3-button USB roller mouse. Of course, as higher performance equipment becomes available at low cost, the preferred minimum specifications can be adjusted accordingly.

Detailed Description Text (29):
With further reference to FIG. 7, an alternative and preferred configuration of the management system 10 can include a publically accessible communications network 78 in the communications path between the HCS 14 and at least some of the AMSs 12, which have a particularly advantageous implementation of the URU 20, designated UIRU 80. The UIRU 80 additionally supports Internet communications as described herein, using faster RF chip topology and increased memory capacity. As shown in FIG. 7, the UIRU 80 includes two RF transceivers 82, which are individually designated 82A and 82B. Each of the transceivers 82A and 82B includes receiver-transmitter-repeater circuitry, an appropriate antenna, a digital frequency isolation circuit and a noise cancellation circuit. Both microcircuits operate at

an extremely low power consumption level and a digital control circuit monitors output power and data error rates. The output frequency is controlled by a variable frequency oscillator (VFO) 84, which allows the unit to operate in 3 different frequency bands, the 3 bands being 900 MHz, 2.4 GHz and 5.4 GHz. The unit has the capability of operating at much higher frequencies with upgrades in the future. Each section is shielded from cross talk and noise by a copper metal mesh shield 85 placed between the T/R sections on the board. The embedded microprocessor board can be either a RISC or advanced PC microprocessor (CPU) 86 for Logic, I/O control of a serial I/O interface 87 and, optionally one or more appliance devices 24, shown as an appliance interface 88 in FIG. 7. The CPU 86 is also interfaced to a high-speed (2 Gbs) network controller 89 that is coupled to the network 78, a digital signal processor (DSP) 90, 2-MB of embedded flash-ROM 91 and 128 MB of non-volatile RAM 92. The CPU 86 preferably also uses cache memory for prefetching of information and/or quick-storage of information pending transmittal.

Detailed Description Text (31):
With further reference to FIGS. 8-10, a more preferred configuration of the UIRU 80 has a three-tier package arrangement in which the transceivers 82 are separated into an upper portion 80A from a lower portion 80B that contains the CPU 86 and associated components, an intervening central portion 80C of reduced plan dimensions mechanically connecting the portions 80A and 80B and providing a passage for suitable wiring. As shown in FIG. 9, six of the transceivers 82 are contemplated, although in many applications four would be supplied initially. In this preferred configuration, there are two DSPs 90, which each share multiple tasks which can include telephony, HDTV/NTSC signal generation and manipulation, high-speed data manipulation, video telephony, communications-mode switching (such as between CDMA, TDMA, Bluetooth, G3/802.11, GSM, etc.), as well as basic communication parameters described above. The UIRU 80 preferably includes a 64/128 bit data bus as indicated by an expansion bus 94 in FIG. 9, the DSPs 90 being connected to the CPU 86 thereby. The DSPs 90 can be plug-in devices, being preferably upgradable by firmware downloads. The inclusion of two (or more) DSPs permits the UIRU 80 to process its own receptions and transmissions concurrently with relay transmissions, using different ones of the transceivers 82.

Detailed Description Text (33):
The UIRU 80 of each AMS 12 and relay unit 20' has a factory-assigned specific and unique serial number, as code resident in firmware, also resident in firmware chip are RF operating parameters for all three basic modes of communications (television, telephone, and data), and the routing table configured for determining a best use by the unit when power was first initiated. The RF communications parameters include frequency bands, bandwidth for each specific band, frequency allocation tables and RF transmitted power level restriction tables. Each of these items can be changed later by reprogramming the firmware chip via a remote download from the head-end transmitter (HTU 18) or by exchanging the firmware module. The operating parameters of firmware chips are preferably protected with a suitable encryption scheme and auto-erasable read protection that erases the firmware if an unauthorized read or copy of any sort is attempted. The firmware chip or module can also be remotely programmed to lock out a user due to lack of payment for services, or to change a table of authorized subscription services in the form of authorization codes for each subscription service optionally provided by the unit.

Detailed Description Text (48):
E. Wireless virtual reality signal, including two-way transmission (WVR). Though virtual reality has yet to evolve into an actual commercially viable product due to limitations in current hardware and software designs, VR is expected to be a big hit in the computing industry. Projected enhancements to the Internet are expected to make possible real-time VR experiences to individuals connected to the Internet. The VR experiences can range from educational tours of zoo's and museums, VR book reading and movies to vacations and Virtual Employment (VE). Called virtual presence today, this ability to allow remote manipulation of devices can thus be

provided without the need for wires. Virtual worlds created and stored at VRNET sites can have the capability of instantly networking virtual neighborhood's. By placing an APC headset on, the individual will then transmit to the central VRISP his personal data file and VR data file. Connections to the VRNET are preferably not autonomous, for maintaining control over the environment and offering security to institutions and individuals connected. A VRNET site can be dedicated to education as well as gaming, wherein individuals in different locations can play and interact in the virtual games of their choice. The VR headset can also interact with a VRNET site to generate catalogs for users.

Detailed Description Text (53):
J. Wireless Revenue Controller (WRC), such as for vending machines, video game machines, slot machines, laundromats, etc.

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L17: Entry 119 of 120 File: USPT Jul 22, 2003

US-PAT-NO: 6595342
DOCUMENT-IDENTIFIER: US 6595342 B1

TITLE: Method and apparatus for a biometrically-secured self-service kiosk system for guaranteed product delivery and return

DATE-ISSUED: July 22, 2003

INVENTOR-INFORMATION:

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APPL-NO: 09/733585 [PALM]
DATE FILED: December 7, 2000

INT-CL-ISSUED: [07] G07F 7/00

INT-CL-CURRENT:

TYPE	IPC	DATE
CIPS	G07 F 7/10	20060101
CIPS	G07 F 7/08	20060101
CIPS	G06 Q 20/00	20060101

US-CL-ISSUED: 194/212; 194/906, 235/381
US-CL-CURRENT: 194/212; 194/906, 235/381

FIELD-OF-CLASSIFICATION-SEARCH: 705/16, 705/18, 705/43, 235/382, 194/906, 194/212, 194/205, 194/210, 700/237, 340/825.35
See application file for complete search history.

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL

☐	4839505	June 1989	Bradt et al.	235/381
☐	4896024	January 1990	Morello et al.	194/906
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☐	5386462	January 1995	Schlamp	379/93.12
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☐	5971273	October 1999	Vallaire	235/381
☐	6344796	February 2002	Ogilvie et al.	340/568.1

ART-UNIT: 3627

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ATTY-AGENT-FIRM: Blakely, Sokoloff, Taylor & Zafman LLP

ABSTRACT:

An apparatus including a secure kiosk capable of containing products and a consumer access device to unlock and retrieve a product from the kiosk is disclosed.

16 Claims, 27 Drawing figures

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L17: Entry 119 of 120 File: USPT Jul 22, 2003

DOCUMENT-IDENTIFIER: US 6595342 B1
TITLE: Method and apparatus for a biometrically-secured self-service kiosk system for guaranteed product delivery and return

Abstract Text (1):
An apparatus including a secure kiosk capable of containing products and a consumer access device to unlock and retrieve a product from the kiosk is disclosed.

Brief Summary Text (7):
An apparatus including a secure kiosk capable of containing products, and a consumer access device to unlock and retrieve a product from the secure kiosk is disclosed.

Drawing Description Text (23):
FIG. 21 is a block diagram for one embodiment of an auto-kiosk system.

Drawing Description Text (24):
FIG. 22 is a flow diagram for the integration of one embodiment of the auto-kiosk system.

Drawing Description Text (25):
FIG. 23 is a diagram for one embodiment of the auto-kiosk system.

Detailed Description Text (3):
A method and an apparatus for a biometrically-secured self-service kiosk system for guaranteed product delivery and return are disclosed. In one embodiment, the apparatus includes a secure kiosk having products and a consumer access device to unlock and retrieve a product from the secure kiosk. Although the use of a digital wallet is described herein, the method and apparatus are not limited to use of digital wallets.

Detailed Description Text (5):
A method and an apparatus for a biometrically-secured self-service kiosk system for guaranteed product delivery and return are disclosed. In one embodiment, the apparatus includes a secure kiosk having products and a consumer access device to unlock and retrieve a product from the secure kiosk.

Detailed Description Text (27):
If the product purchased is electronic in nature (e.g., software, content such as digital images, stock purchases, etc.) electronic distribution may be used. In one embodiment of electronic distribution, the TPCH 110 functions as the middleman of the distribution channel. This allows the TPCH 110 to retain user privacy by not exposing addressing information and possibly email addresses to third parties. In an embodiment which utilizes a POS terminal and a POS terminal is used for distribution, the content may be encrypted at the source and distributed via the system to the POS terminal wherein the POS terminal subsequently decrypts the distributed material. The POS terminal may then pass the data to an appropriate place desired by the user, for example, to a user controlled device such as PC storage, a digital wallet or a privacy card.

Detailed Description Text (39):
The TPCH agent 615 handles system management and policy control, and forms the core functionality of the TPCH 600. In one embodiment, within the entire system, there is one clearing house agent, which resides permanently at the clearing house. Among the responsibilities handled by the agent include internal system management functions such as data mining, financial settlement and allocation of payments to internal and external accounts, and registration of new users joining the system.

Detailed Description Text (55):
In one embodiment, the privacy card is the size of a credit card. In one embodiment, to minimize the amount of circuitry and therefore the size of the card, a display is not provided. In addition, it is contemplated that network communication capabilities are not included on the privacy card. In such embodiments where desirable functionality is not included on the privacy card, a digital wallet, as described below, is provided to interface between the privacy card and the eCommerce network. The digital wallet, in an alternate embodiment, may be configured to function by itself. Alternately, such functionality is provided on the privacy card itself such that a device such as a digital wallet is not needed.

Detailed Description Text (102):
In addition to the eCommerce functionality, the digital wallet may be configured to provide other functional capabilities. For example, the digital wallet can be configured to contain extra user information, such as passport numbers or medical records. The digital wallet may contain personal digital assistant functionality such as a calendar. An extra memory slot can be used to insert memory cards containing digital photo albums for viewing on the screen or a slot on the device may receive a card that has pager or cell phone functionality built-in.

Detailed Description Text (150):
The transaction device may be configured to carry both the payment and loyalty account information in the same magnetic stripe, because these stripes actually are composed of three separate bands. If the current legacy POS terminal in the retail store is able to read the other magnetic stripe bands, then it can read both accounts at the same time as the card is swiped through the reader.

Detailed Description Text (168):
One embodiment of a transaction performed in the retail environment will be described with respect to FIG. 16. At step 1601 a clerk triggers the purchase action, after having passed the items to be purchased through a checkout procedure, normally by scanning barcodes on the packaging. At step 1602 the retail POS terminal displays the current transaction total, and asks the clerk to continue processing the transaction. At step 1603 the clerk requests payment from the user. At step 1604, the user activates the transaction device, requesting a payment transaction using any eCoupons that might have been collected by the transaction device prior to or during shopping. The transaction device requests the user to authenticate himself, for example, by fingerprint recognition, step 1605. The user presses on the finger print recognition pad to continue, step 1606. After verifying the user, the transaction device displays the collection of eCoupons that the user requested on its display screen, step 1607.

Detailed Description Text (170):
At step 1609, payment is initiated. At step 1610 the user selects an account to use for payment by interacting with the transaction device, either by tapping on a text menu or on icons that represents the account to use. At step 1611, the magnetic stripe generator of the transaction device is programmed with the appropriate account number information.

Detailed Description Text (180):
When the personal POS terminal receives the transaction request, it communicates with the transaction device, asking the transaction device to validate the user,

confirm that the user wants to make this transaction, and get the appropriate information for which account the user wants to use for payment.

Detailed Description Text (181):
The transaction device may request the user's attention, either via audio or video signals, or both. The transaction device screen, or alternately, a personal POS display, PC or DTV screen, displays the transaction amount, and requests the user to select which account to use for payment. When the user has selected an account, the transaction device asks the user to confirm the entire transaction and that the user is authorized, for example, by entering a PIN or providing a fingerprint recognition sample.

Detailed Description Text (207):
In another embodiment for physical product distribution, an "anonymous drop-off point", such as a convenience store or other ubiquitous location is used. In one embodiment, it involves the use of a "package distribution kiosk" that allows the user to retrieve the package from the kiosk in a secure fashion.

Detailed Description Text (209):
Instead of delivering the package to the user's home or another address that identifies the user, the distributor takes the package to the specified drop-off location. In one embodiment the drop-off location has one or more package distribution kiosks, which in one embodiment are machines that can securely hold and release packages. The kiosk may automatically read the electronic label of the package in order to determine which transaction device is the legitimate owner of the package.

Detailed Description Text (210):
At some later time, the user goes to the kiosk, and activates the transaction device that carries out a secure exchange with the kiosk to release the appropriate package(s). The user can choose to inspect the product there and put it back into the kiosk if there is any damage, incorrect product, etc. The kiosk issues the delivery confirmation or rejection message to the TPCH, and the TPCH in turn passes the appropriate information to the vendor and distributor.

Detailed Description Text (225):
A method and an apparatus for a biometrically-secured self-service kiosk system for guaranteed product delivery and return are disclosed. In one embodiment, the apparatus includes a secure kiosk having products and a consumer access device to unlock and retrieve a product from the secure kiosk.

Detailed Description Text (226):
In one embodiment, a biometrically-secured self-service kiosk system (Auto-Kiosk model) for guaranteed product delivery and return is enabled via a transportable access device such as a Digital Wallet. The method may provide many advantages. For example, the method may eliminate the need for a consumer to be "at home" during a scheduled delivery window. Packages are available 24 hours per day. Also, because delivery is completed on-site at the kiosk, many so called "lost freight" occurrences that might occur if the delivered goods were left "on the front step" of the receivers home, may be eliminated. The Auto-kiosk model also may eliminate the need for paper-based authentication and receipt of delivery. The model also can minimize costs, including costs associated with fraud, to merchants, consumers, and distributors.

Detailed Description Text (227):
FIG. 21 is a block diagram for one embodiment of an auto-kiosk system. Consumer access device 2110 with Privacy Card 2120 communicates with Point of Sale (POS) terminal 2130 via communication link 2020. POS 2130 exchanges information with transaction privacy clearing house (TPCH) 2140. TPCH 2140 interacts with financial processor 2150 to conduct transactions with vendor 2160. Distributor 2170 receives

products from vendor 2160 and delivers products to kiosk 2180. The consumer retrieves products from kiosk 2180.

Detailed Description Text (228):
In one embodiment, the apparatus can include secure kiosk 2180 and consumer access device 2110 to unlock and receive products from secure kiosk 2180. In one embodiment, secure kiosk 2180 can receive products. In another embodiment, consumer access device 2110 can unlock and submit a product for return to secure kiosk 2180. In one embodiment, consumer access device 2110 is a Digital Wallet. In another embodiment, consumer access device 2110 includes a biometric device to identify the consumer. In another embodiment, the apparatus includes a secure communication channel between vendor 2160 and secure kiosk 2180 to transmit a consumer identification associated with a product retrieved from secure kiosk 2180 to prevent consumer 2100 from repudiating receipt of the retrieved product. In another embodiment, the apparatus can include a device to deliver a product from vendor 2160 to secure kiosk 2180. In another embodiment, the apparatus can include a device to track a product from vendor 2160 to secure kiosk 2180 to prevent vendor fraud or theft. In yet another embodiment, secure kiosk 2180 can be a secure, transportable storage box which receives products.

Detailed Description Text (229):
FIG. 22 is a flow diagram for the integration of one embodiment of the auto-kiosk system. A secure merchant-to-consumer "on demand" delivery model is created. At processing block 2210, the delivery of a product from a vendor to the secure kiosk is established. In one embodiment, the kiosk is fully automated, the delivery can be made 24 hours per day/7 days per week thereby enabling a "one stop" guaranteed delivery model for shippers and distributors. The delivery from vendor to kiosk is tracked using a tracking device to prevent vendor fraud or theft. In an alternate embodiment, the kiosk is a secure, transportable storage box that is dropped off at the consumer's home or office.

Detailed Description Text (230):
At block 2220, the consumer's retrieval of status information regarding the product to be delivered to the kiosk is established. The consumer can be notified that the product is due for arrival at the kiosk and is given an option to redirect the product to another shipping destination. The consumer may command the redirection either remotely or at the kiosk itself. Once delivery at the kiosk is accepted by the consumer then the product may be retrieved.

Detailed Description Text (231):
At block 2230, the consumer's unlocking and retrieving of a product from the secure kiosk using a consumer access device is established. In one embodiment, the consumer access device may utilize a biometric device, such as a fingerprint scanner, to ensure consumer privacy and system security. In one embodiment, the Auto-Kiosk model enables automatic availability of products for pick-up by the consumer 24 hours per day/7 days per week. In one embodiment, a secure communication channel is established between the vendor and the consumer to transmit a consumer; identification associated with a product retrieved from the kiosk to prevent the consumer from repudiating receipt of the retrieved product thereby enabling a secure model for non-repudiation. In another embodiment, certain types of fraud are minimized or eliminated including merchant/shipper-related fraud do to full-cycle tracking of products. In another embodiment, cost savings to merchants, consumers and shippers are enabled.

Detailed Description Text (232):
At block 2240, an alternate embodiment of the system, wherein a unique "shop floor" kiosk inventory selection model is created is established. In this embodiment, the consumer may visit the kiosk with a consumer access device. The consumer access device and the kiosk exchange information and automatically select an array of products suitable for the consumer from those products that are available for sale

at the kiosk. The consumer can then choose to purchase a product held in general stock at the kiosk.

Detailed Description Text (233):
At block 2250, submittal of a product to the kiosk for return using a consumer access device is established. In one embodiment, a shipper is automatically notified to retrieve a product and return it to the vendor.

Detailed Description Text (234):
FIG. 23 is a diagram for one embodiment of the auto-kiosk system. In one embodiment, Self-service kiosk 2310 can have many layers of product containers. In one embodiment, a consumer uses Digital Wallet 2350 with biometric authentication component to communicate with Kiosk control and access port 2370. In one embodiment, Digital Wallet 2350 is infrared enabled and communicates with access port 2370 via infrared radiation 2360. In one embodiment, Digital Wallet 2350 has USB-enabled biometric authentication component 2340.

Detailed Description Text (235):
In one embodiment, infrared communication 2360 takes place between Digital Wallet 2350 and access port 2370. In another embodiment, the communication is by Bluetooth. In one embodiment, Digital Wallet 2350 with USB-enabled biometric authentication component 2340 communicates with USB port 2380 on access port 2370.

CLAIMS:

1. An apparatus comprising: a secure kiosk to receive a product and data associating a product identifier with a consumer access device identifier from a product provider who is unaware of an identity of a consumer of the product; and a consumer access device to send information identifying the consumer access device to the secure kiosk, wherein the secure kiosk is to release the product if the information sent by the consumer access device is in conformity with the data received from the product provider.

2. The apparatus of claim 1, wherein the secure kiosk is to receive the product that the consumer submitted for return using the consumer access device.

5. The apparatus of claim 4, further comprising: a secure communication channel between a vendor and the secure kiosk to transmit a consumer identification associated with the product released from the secure kiosk to prevent the consumer from repudiating receipt of the released product.

6. The apparatus of claim 1, further comprising: a device to deliver the product from a vendor to the secure kiosk.

7. The apparatus of claim 6, further comprising: a device to track a delivery of the product from the vendor to the secure kiosk to prevent vendor fraud or theft.

8. The apparatus of claim 1, wherein the secure kiosk further comprises: a secure, transportable storage box which receives products.

9. A method comprising: receiving a product and data associating a product identifier with a consumer access device identifier from a product provider who is unaware of an identity of a consumer of the product; receiving information identifying a consumer access device from the consumer access device; and releasing the product from a secure kiosk if the information received from the consumer access device is in conformity with the data received from the product provider.

10. The method of claim 9, wherein the information received from the consumer access device identifies a product selected by the consumer from available products in the secure kiosk.

12. The method of claim 11, further comprising: notifying the consumer that the product is due for arrival at the secure kiosk by a transaction privacy clearing house acting as an intermediary between the consumer and the product provider; and enabling the consumer to remotely redirect the product to another shipping destination.

16. A computer readable medium comprising instructions, which when executed on a processor, perform a method comprising: receiving a product and data associating a product identifier with a consumer access device identifier from a product provider who is unaware of an identity of a consumer of the product; receiving information identifying the consumer access device from a consumer access device; and releasing the product from a secure kiosk if the information received from the consumer access device is in conformity with the data received from the product provider.

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Toshiba brings Bluetooth to market

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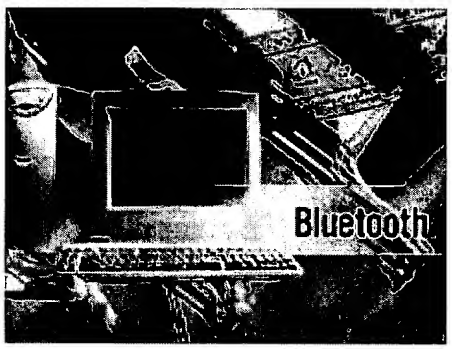

September 26, 2000
Web posted at: 11:17 a.m. EDT (1517 GMT)

by Cameron Crouch

(IDG) -- Bluetooth, the short-range wireless technology that connects devices, may finally be ready for prime time with the release next week of the Toshiba Bluetooth PC Card.

Toshiba plans to ship the first Bluetooth PC Card on Monday from its ShopToshiba Web site. The $199 card can be used with notebook PCs with a Type II PC Card slot, and a minimum configuration of a 133-MHz Pentium processor, 64MB of memory, and either Microsoft Windows 98 Second Edition or Windows Millennium Edition.

Bluetooth is a low-cost wireless radio transmission specification for creating personal networks of up to eight devices at a distance of 10 to 100 feet. The long-awaited technology is designed to replace cables and link notebooks, printers, mobile phones, handheld devices, and even car systems at data rates up to 1 megabit per second. Bluetooth products are trickling out (See "Bluetooth Debuts in Bits and Pieces.")

The Toshiba Bluetooth PC Card may have limited appeal until more Bluetooth devices hit the market, but it at least shows that Bluetooth is now more than just talk.

The Bluetooth Connection

Toshiba helped develop the specification as part of the Bluetooth Special Interest Group, says Warren Allen, senior product planner of wireless products at Toshiba America. "We're already shipping a Bluetooth card in Japan."

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For its Bluetooth PC Card, Toshiba licensed the technology from Motorola, which also licenses Bluetooth to IBM.

"By midyear 2001, we'll offer built-in Bluetooth and 802.11b with an antenna array in the display lid of our notebooks," Allen says. Toshiba also plans to release an 802.11b card for wireless LANs. The 802.11b wireless specification is for networking over larger areas and is faster than Bluetooth.

Toshiba's Bluetooth PC Card comes with a Bluetooth software suite as well as SPANworks productivity and collaboration software. SPANworks lets you control device authentication, and even share files or conduct wireless chat. Device authentication is the way Bluetooth users can deny or accept communication with other Bluetooth devices. The card will automatically identify any Bluetooth device within range, Allen says.

Early Devices Lonely

Of course, Bluetooth communications are limited until more Bluetooth-enabled devices hit the market. Until these arrive, the most valuable use of the technology will probably be sharing files between two notebooks using Bluetooth PC Cards.

"Through SPANworks or Windows Explorer, you can send a compressed version of a presentation so that, as the presenter pages through, the pages flip on the other connected machines," Allen says. "You can also send vCards (a form of electronic business card from Versit) from [Microsoft] Outlook."

Toshiba successfully demonstrated wireless chat between two notebooks via Bluetooth cards. Power drainage, a key factor in any kind of mobile computing, is fairly minimal with the Bluetooth PC Card, Allen says.

"It uses about 70 milliamps at 2.7 watts," he says. "That's less than an internal modem card, which uses about 200 milliamps."

Vendors Promise Support

Bluetooth will become more useful as devices proliferate. Unlike infrared, Bluetooth lets you use a phone as a wireless modem for your laptop without taking the phone out of a bag. Or you could use a printer without cables and network access.

"Bluetooth would be great on a plane where you could wirelessly tap into the plane's already existent Internet connection," Allen says. "Boeing has demonstrated Bluetooth connectivity is safe on planes, but airlines will likely wait for Bluetooth to become successful among consumers before they deploy

it."

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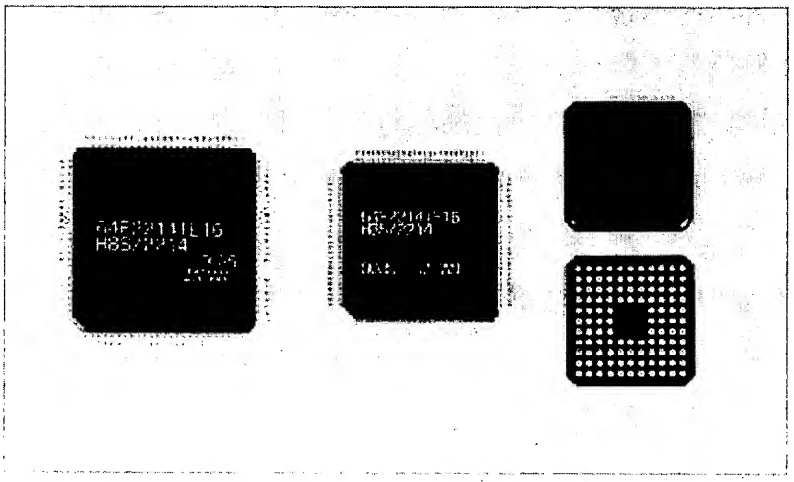
May 11, 2000

Hitachi Releases 16-Bit Single-Chip H8S/2214F Microcontroller for Bluetooth- enabled application
- Allowing shorter development period and smaller, lower-cost product for Bluetooth- enabled application -



Hitachi, Ltd. (TSE: 6501) today announced the 16-bit single-chip H8S/2214F microcon for use in products that support the Bluetooth network technology, providing wirel interconnection of mobile phones, notebook PCs, and similar devices. Sample shipmen begin in August 2000 in Japan.

The H8S/2214F, employing Hitachi's highest performance 16-bit microcontroller H8S CP is the baseband controller for Bluetooth, following the H8S/2238F currently in produ With the recent growth in the market for mobile phones, notebook PCs, digital still and similar portable information products, attention is now being focused on Bluetoo a wireless network technology for linking such products. The Bluetooth standard, s by the Bluetooth SIG*1, provides for a technology achieving a maximum data transmiss of 1 Mbits/sec with approximately up to 10 m, using the radio band at 2.4 GHz. Init of products incorporating the Bluetooth standard are anticipated during this year.

In September 1999, Hitachi, Ltd. announced to collaborate with Silicon Wave ,Inc of to provide total solutions offering baseband controllers, RF transceiver chip-sets system development support. Silicon Wave develops and supplies the RMC (Radio Modem product family as RF transceivers and Hitachi develops and supplies the baseband con

Hitachi has previously released the 16-bit microcontroller H8S/2238F, with on-chip 2 flash memory and 16-kbyte RAM, as a Bluetooth baseband controller, and is now supply product to the market.

The H8S/2214F offers more compact memory, with on-chip 128-kbyte flash memory and 1 RAM. The provision of on-chip flash memory means that changes in the Bluetooth sta data modifications can be handled with ease, enabling development times to be reduce At the same time, the pin arrangement is fully compatible with the H8S/2238F, and ad function compatibility has also been maintained for peripheral functions, making it to use boards and software developed for the H8S/2238F.

The H8S/2214F is capable of a fast 16 MHz maximum operating speed at an operating vo

2.7 V to 3.6 V. It includes a UART*2 capable of asynchronous serial transfer at a m data transmission speed of 720 kbits/sec, as required by the Bluetooth standard, and serial data communication at
1 Mbits/sec can easily be achieved by use of the DTC*3 and DMAC*4. The comprehensiv on-chip peripheral functions also includes a 3-channel 16-bit timer, single-channel timer, and single-channel D/A converter, making it possible to create compact Blueto -compatible products at low cost.
The package lineup comprises two 100-pin plastic TQFPs (0.5 mm pin pitch and 0.4 mm and a 112-pin CSP, enabling Bluetooth products to be kept small and slim.

The Bluetooth-oriented device lineup will be further extended in the future, with th development of a mask ROM version (H8S/2214) and a model with a USB*5 and other peri functions on-chip.

Notes: 1. The Bluetooth SIG (Special Interest Group), formed in 1998, currently includes over 1,500 companies, including Hitachi, with a core group of nin promoter companies.

2. UART (Universal Asynchronous Receiver Transceiver): A transmission/recepti circuit for asynchronous serial communication.

3. DTC (Data Transfer Controller): A DTC is started by an interrupt, and can data transfer instead of the CPU. Transfer information is located in inte enabling a greater number of channels to be used.

4. DMAC (Direct Memory Access Controller): A function or device that performs for direct data transfer, instead of the CPU, from memory to memory or bet and a peripheral device.

5. USB (Universal Serial Bus): A serial bus interface for connecting PC perip devices, replacing the previous RS-232C interface, and offering higher spe commonality with the keyboard interface, etc.

< Development Environment >

The H8S Series C compiler, assembler, linkage editor, librarian, simulators, debugge can be used as the user software development environment on widely used personal com workstations. In addition, a variety of emulators, including the E6000 realtime emu available as hardware support tools.

< Typical Applications >

¡¦Bluetooth-enabled products: Bluetooth modules, PDAs, PCMCIA cards, mobile phones,

< Prices in Japan > (For Reference)

ProductCode		Package	Sample Price (Yen)
H8S/2214F	HD64F2214TE16	TQFP-100	1,600
	HD64F2214TF16	TQFP-100	1,600
	HD64F2214BP16	CSP-112	1,700

[Supplementary Material]
< Specifications >

Item	H8S/2214F Specifications
Operating frequency/operating voltage	16.0 MHz/2.7 V to 3.6 V

ROM	128-kbyte flash memory
RAM	12 kbytes
Address space	16 Mbytes
16-bit timer	3 channels
Watchdog timer	1channel (no clock function)
DTC	On-chip
DMAC	On-chip
Serial communication interface (SCI)	3 channels (1 high-speed UART channel)
ID/A converter	8 bits x 1 channel
Packages	100-pin plastic TQFP ·14 mm x 14 mm, 0.5 mm pin pitch ·12 mm x 12 mm, 0.4 mm pin pitch 112-pin CSP ·10 mm x 10 mm, 0.8 mm pin pitch

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Personal Area Network: A Bluetooth Primer

by Albert Proust
11/03/2000

Anyone who's ever wrestled with an octopus of black and beige cords coming out of the back of their laptop computer

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can appreciate the value of Bluetooth. Bluetooth is an emerging standard and a spec for (in the words of the Bluetooth SIG [special interest group]): "small-form factor, low-cost, short range radio links between mobile PCs, mobile phones and other portable devices." In other words, it's a wireless connection between PCs, peripherals, and portables that will let the devices share and synch information, without having to make a physical connection.

Bluetooth's original backer is the Swedish mobile phone maker, Ericsson, which named the technology for a 10th-century king of Denmark, Harald Blåtland, who unified the Danes and Norwegians. The spec's origins date back to 1994, when four companies joined Ericsson to develop the technology: Nokia, Toshiba, Intel, and IBM. Today, the Bluetooth SIG includes nearly 2,000 companies, and prototype devices are beginning to make their way into the marketplace.

Although the idea behind Bluetooth (wireless communication between devices) has been around, it's the momentum behind this standard and the agreement among hundreds of vendors and manufacturers that has brought it to the verge of becoming a reality. The power of the Bluetooth vision begins to really emerge when you consider a world of devices intelligently connected and carrying much of their communication load automatically.

Imagine having a Bluetooth-enabled phone or PDA on you. As you approach your home, you're able to control lighting, heating, even locks with your PDA. As you enter your home, you can use the same device to turn on the television set or the stereo system. Meanwhile, your refrigerator takes the initiative to update your shopping list. As you can see, the full picture includes a whole new level of automation where devices and appliances are programmed to communicate important information to each other, with or without human intervention.

How it works

Bluetooth uses the radio waves located in the frequency band of 2.4 GHz (2400 to 2483.5 MHz), an increasingly popular (and crowded) slice

of the spectrum. In this band, Bluetooth transmits voice and data at flows lower than 1 megabit per second.

Bluetooth devices can function in two modes:

- circuit switched (the most common mode for voice communications, on land and wireless digital networks), and
- packet switched (the mode for Internet data, as well as for higher bandwidth mobile communication systems on the horizon, like GPRS [General Packet Radio Service]).

A device can use either one or both of these modes. In packet switched mode, connection is asynchronous with a rising flow of 57.6 Kbps to 721 Kbps. In the second case, connection is synchronous with a flow of 64 Kbps.

Piconet and Scatternet

A Bluetooth network (known as Piconet) can allow the interconnection of eight devices in a radius of 10 meters. This network can be fixed or provisional (a mobile or transitory network). In a Piconet, the Master seeks the devices in its entourage by emitting requests (broadcast). The slave answers with its identification number.

As many as 10 Piconets can overlap to form a Scatternet, linking up to 80 Bluetooth appliances. Beyond this, the network saturates. Indeed, only 79 transmission channels are employed by the Bluetooth protocol, a limit based on the frequency.

By default, Piconets transmit up to 10 meters (about 30 feet). However, you can increase it to 100 meters by increasing the power output of 100 mW (milliwatts), as opposed to the 1 mW of default Bluetooth. However, compared to GSM (Global System for Mobile communications), which consumes between 1.5 and 2 Watts, this is still a weak signal. Manufacturers are working to make Bluetooth devices that adapt to the necessary proximity, so as not to consume more energy than is necessary.

The Personal Area Network

Bluetooth isn't designed to compete with wireless local area networks. Even its close-range throughput of 1 Mbps doesn't compare with the 11 Mbps that the emerging standard for wireless LAN, IEEE 802.11, offers.

Instead, Bluetooth's promoters are positioning it as the technology for the Personal Area Network (PAN), and are targeting appliances that don't require large flows -- like printers, personal computers, and mobile phones. One concept that's been put forward is the mobile PAN: a communication device clipped to your belt could contain a GSM transceiver that communicates with the wider world.

Bluetooth Sources

Bluetooth SIG
This site has details about the Bluetooth special interest group, its meetings, and its members. There's also a cartoony Flash animation on the history of Harald Blåtland and the Vikings.

Ericsson
Ericsson's T36 is the first Bluetooth-enabled phone.

Hung Up On Gadgetry
ZDNet's eWeek

Meanwhile, the same device has a Bluetooth transceiver that communicates with your headset (replacing your mobile phone), your PDA, your MP3 player, allowing all these devices to communicate with each other and the larger world.

Since it is not a very expensive technology (between $5 and $20 per chip), it can easily be placed in many devices. Also, Bluetooth doesn't require an access point, unlike the traditional radio operator networks. It's well suited for mobile devices, since it can join a local Piconet quickly, as soon as the two devices are in a sufficient perimeter.

And unlike infrared networks (like two Palm computers beaming each other), Bluetooth doesn't require you to align objects for them to communicate.

Towards the intelligent whole

Although most Bluetooth devices are still at the prototype stage, Ericsson has delivered the first Bluetooth-enabled phone, the Ericsson T36. This GSM phone uses Bluetooth to communicate with the handset. Thus, a user could wear the headset and chat away while the handset was stashed away in a briefcase. Of course, since the power of the technology is in the network, a single Bluetooth device without others to communicate with is ... well, a start at least.

Still, the momentum behind this de facto standard suggests a ripe market ahead: Cahners In-Stat Group predicts 1.4 billion Bluetooth-compatible devices by 2005. That's a conquest King Harald could be proud of.

Albert Proust is co-authoring a book on WAP for O'Reilly Media, Inc..

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